05/19/14 Agenda:

- Any retake or make ups need to be completed by THIS FRIDAY (5/23)!!!!

- Review Homework
    - Worksheet 5 - Review Worksheet

- Section 10.7 - Equations of Circles

- Tomorrow - Review 10.1-10.6
- Wednesday - Unit 12 Quiz/Test
- Thursday- Friday - Review for Final Exam

- Homework
    - Worksheet 6 - Equations of Circles

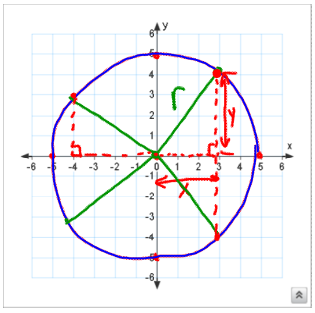
Sections 10.7 - Equations of Circles
Targets 12F

May 19, 2014

Goal: Graph circle equations and identify the radius and center of the circle from the equation of the circle.

Equation of a Circle: x & y are any point on the circle

r =



Center at the origin:

$a^2+b^2=c^2$

$x^2+y^2=r^2$

$x^2+y^2=r^2$

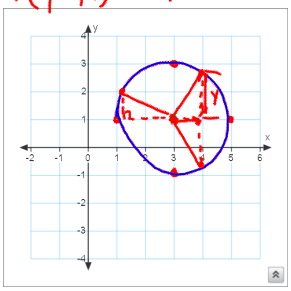
$(x-h)^2+(y-k)^2=r^2$

Center NOT at the origin:

Center = (h, k)

(3, 1)

r = 2



x & y are any point on the circle

$$(x-h)^2+(y-k)^2=r^2$$

Center = (h, k)

Write the equation of a circle whose center is (3, 6) & r=4

h k

$(x-3)^2+(y-6)^2=4^2$

$(x-3)^2+(y-6)^2=16$

Write the equation of a circle whose center is (0, -2) & d=18

h k r = 9

$(x-0)^2+(y-(-2))^2=9^2$

$x^2+(y+2)^2=81$

Identifying the Center and Radius:

$(x-h)^2+(y-k)^2=r^2$

$(x-7)^2+(y-2)^2=25$

$Center=(7,2)$

$r=5$

$(x-h)^2+(y-k)^2=r^2$

$(x+4)^2+(y-5)^2=100$

$Center=(-4,5)$

$r=10$

$(x-h)^2+(y-k)^2=r^2$

$x^2+(y+1)^2=9$

$Center=(0,-1)$

$r=3$

$x^2+y^2=36$

$C=(0,0)$

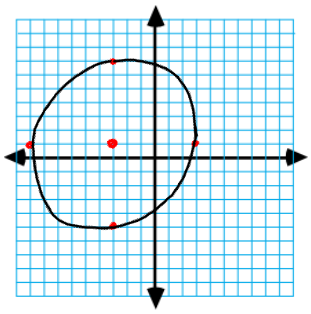
$r=6$

Graphing Circles:

$(x+3)^2+(y-1)^2=36$

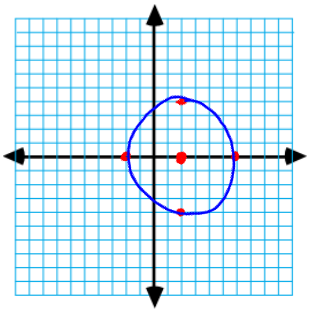
$Center=(-3,1)$

$r=6$



$C=(2,0)$

$r=4$



Summary of Angles

Vertex is Center: mAngle = mArc

Vertex is on Circle: mAngle = half mArc

Vertex is outside Circle: mAngle = half the difference of Arcs

Vertex is inside Circle: mAngle = half the sum of Arcs

Equation of a Circle

$$(x-h)^2+(y-k)^2=r^2$$